

Work Order ID 165042

Monday, August 14, 2017 11:54:37 AM

165042

Page 1

Item ID: 647.3917

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Doubler

Start Date: 8/21/2017 Start Qty: 8.00

8

Cust Item ID:

Required Date: 9/12/2017 Req'd Qty: 8.00

8

Customer:

Reference:

AUG 14 2017

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

647.3900

C2

110

0.00

110

Waterjet

Memo

0.62

FLOW CNC Waterjet

1-Cut as per Dwg

Dwg Rev: C.2Prog Rev: C.2

2-Deburr if necessary

(10)

08/17/08/14

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.08

Quality Control

(10)

08/17/08/14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

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Page 2

Item ID: 647.3917 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Doubler
Start Date: 8/21/2017 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 9/12/2017 Req'd Qty: 8.00 ***8*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.16				<u>10</u>			DAS 38 9-89 AUG 17 2017
140 *140* Outsource4 Outsource process - Anodize	Outsource process-Anodize per QSI017 4.1.10.1 Memo Issue P/O to ATG: <u>37552</u> 1- Black Anodize as per Dwg 647.3900 2- PRIME AS PER DWG Certification of Conformity is required	0.00 1,440.00				<u>10</u>			DAS 13 9-89 AUG 25 2017
150 *150* Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs Memo	0.00 0.16							10 x 8017-9-6

Hard Anodize 1AW MIL A-8625 Type N1
Class 2 Color Black.
1-2" MIL. max
Prime 1AW MIL-P-23377J Type 1
Class 2.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC5- Inspect part completeness to step on W/O

0.00

160

QC

Memo

0.16

Quality Control

⑥

17.09.07

DAS
9
2-89

190

Identify as per dwg & Stock Location

0.00

190

Packaging

Memo

0.08

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

10

DAS
6
2-89

SEP 12 2017

200

QC21- Final Inspection - Work Order Release

0.00

200

QC

Memo

0.80

Quality Control

17/9/18

④

SEP 13 2017

Picklist Print

Monday, August 14, 2017 11:54:37 AM

Page 1

Work Order ID: 165042

165042

Parent Item: 647.3917

647.3917

Parent Item Name: Doubler

Start Date: 8/21/2017

Required Date: 9/12/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 14.12.03 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.090		Purchased		No		110	sf	44.1200	0.0434	0.365474			

M2024T3S 0.90

2024-T3 .090 sheet

**

08/17/14

Location

Loc Qty

Loc Code

MAT021

44.12

123287

11.42

m130387

32.7

1.5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

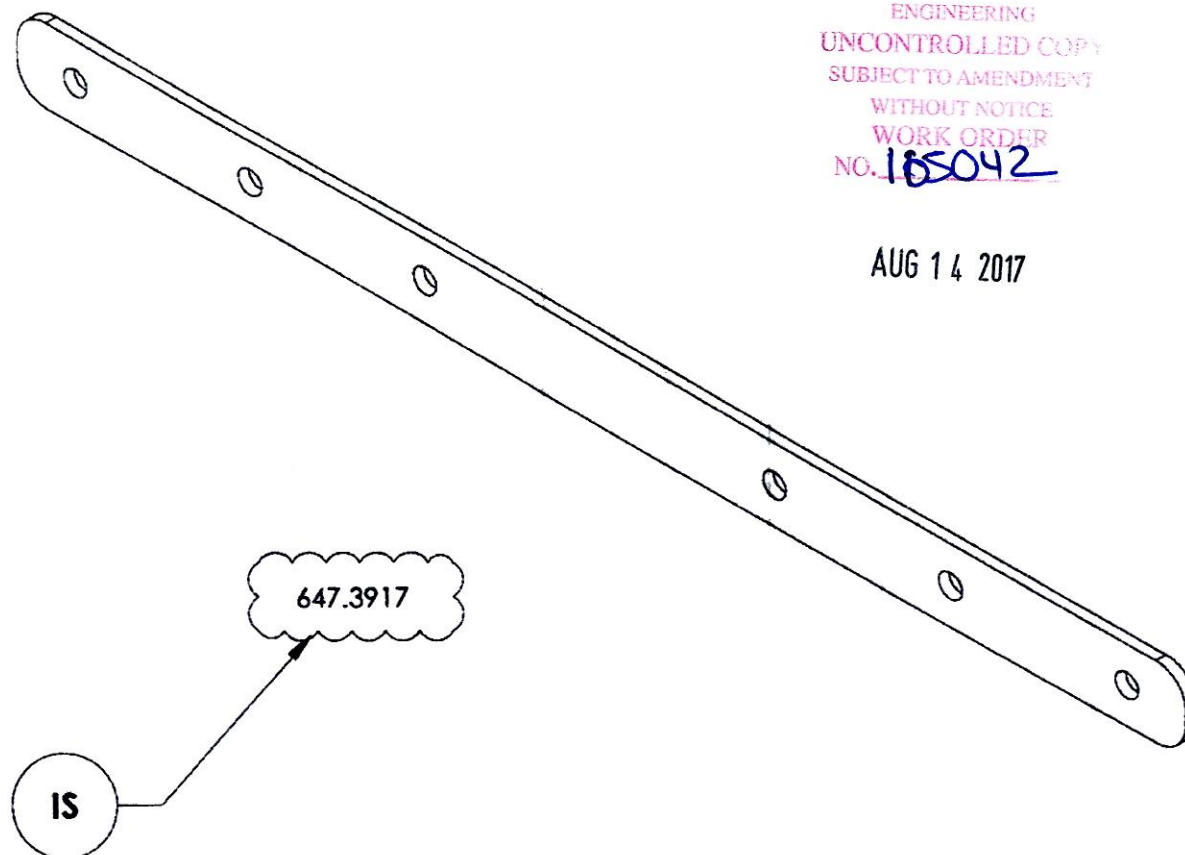
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process								
Misidentified ☐	☐ Past Due								
		OTHER : ☐							

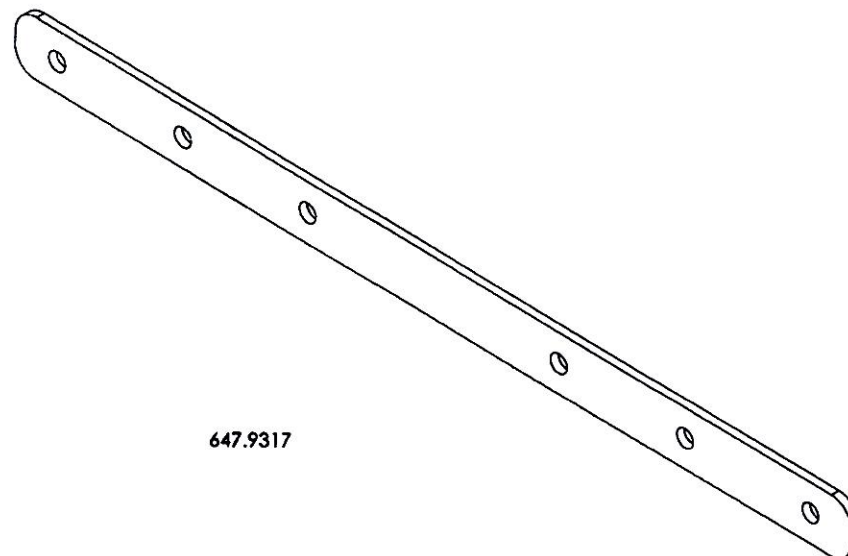
SHEET 12, ZONE B5 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 185042

AUG 14 2017

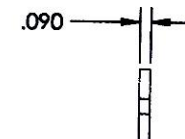
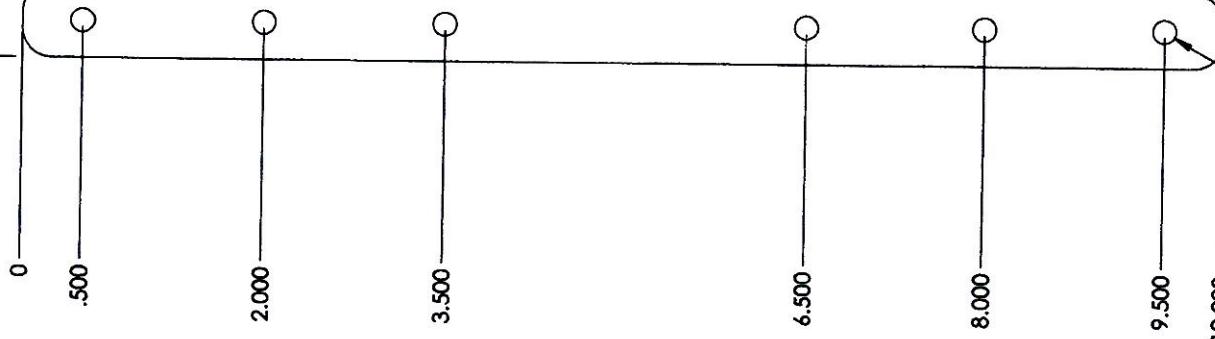


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THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



R.250
4 PL

.625



Ø.196
6 PL

ORIGINAL DATE REV. DATE DRAWN BY CHECKED BY DESIGNED BY APPROVED BY CONTRACT NO.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE: 3 PLACE DECIMALS ±.01 ANGLES ±.5°		SHEET B CAGE CODE 07M026 SCALE NONE	DIV. NO. 647.3900 SHEET 12 OF 12
		DEFLECTORS REV. C	

DART AEROSPACE APICAL INDUSTRIES, INC. dba DART AEROSPACE	ENGINEERING CHANGE NOTICE NO. 04948				SHEET 1 OF 2	
	DWG NO. 647.3900	REV: C	PREPARED BY: M. ANDECK	DATE: 05/04/15	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: DEFLECTORS					
APPROVED BY: ENGR <i>[Signature]</i>		MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED TOLERANCE AND NOTES				ECR: D-15-01

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 APPLY F/N 3 AS REQUIRED TO ALL FAYING SURFACES OF F/N 6, 7 & 8 UPON ASSY.
- 6 MAXIMUM OR MINIMUM DIMENSION AFTER FINISH.
7. .0625 HOLE MAY BE ADDED FOR FINISHING PURPOSES
- 8 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX. APPLY FINISH AFTER ASSEMBLY.
- 9 FINISH: PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N; 1-2 MIL MAX.
- 10 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.

SHEET 1, ZONE B1 IS:

11	R	647.3917	2			DOUBLER	10	8
F/N TC	PART NUMBER	.3903	.3902	.3901		DESCRIPTION	MATERIAL	SPECIFICATION
		QTY						
DOCUMENTS EFFECTED:						CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☒ BOM						☐ MAJOR ☒ MINOR	☐ YES ☒ NO	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO37552**

Purchase Order Date 8/25/2017

PO Print Date 8/29/2017

Page Number 1 of 7

Order From :

VC-ATG001

Ship To : DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED
8/29/2017

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

Buyer

Diane Baker

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
	Line Comments		Promise Date				
	Delivery Comments						
1	165042	647.3917 Doublers	9/1/2017 Yes 9/1/2017		10.00	\$6.60	\$66.00

As per Dwg 647.3900 REV C2
Hard Anodize IAW MIL-A-8625, Type III, Class 2, Color Black; Prime IAW MIL-PRF-23377J, Type I, Class N, 1-2 mil max
RUSH!!!!

Line Total: \$66.00

2	164348	646.9910 Struts	9/13/2017 Yes 9/13/2017		10.00	\$13.40	\$134.00
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As per Dwg 646.9900 Rev N/C
Hard Anodize IAW MIL-A-8625, Type III, Class 2, Color Black; Prime IAW MIL-PRF-23377, Type I, Class N

Line Total: \$134.00

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

8/29/2017



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913773

Date: 01-Sep-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
10 ea	Part: 647.3917 Doubler Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils). Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0001-.0002" (1 - 2 mils) per drawing. Job: 21621	Rev: C2 PO: PO37552 Line: 1	9-9-17 DAS 9-86 SEP-9-16
4 ea	Part: D4726-1 Handle Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Job: 21633	Rev: B PO: PO37552 Line: 13	
12 ea	Part: D4726-1 Handle Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Job: 21634	Rev: B PO: PO37552 Line: 14	
10 ea	Part: D2348 Wearplate (Key Way) Black Anodize per MIL-A-8625F, Type II, Class 2, .0004-.0010" (.4 - 1 mils). Job: 21635	Rev: C PO: PO37552 Line: 15	
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: 01/09/2017 Certified Signature: Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Made in Canada.			



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913773

Date: 01-Sep-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via
		OUR TRUCK
Quantity	Description	
	Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. SPN-9-6	
Made in Canada.		